Exercise 1 *Suppose that $r = f(t)$ is the radius, in centimeters, of a circle at time t minutes, and $A(r)$ is the area, in square centimeters, of a circle of radius r centimeters.*

Which of the following statements best explains the meaning of the composite function $(A(f(t))$?

Multiple Choice:

(a) *The area of a circle, in square centimeters, of radius r centimeters.*

(b) *The area of a circle, in square centimeters, at time t minutes.* ✓

(c) *The radius of a circle, in centimeters, at timet minutes.*

(d) *The function f of the minutes and the area.*

(e) *None of these choices.*

Suppose that $r = f(t) = t^3$. Recall that $A(r) = \pi r^2$. Find $A(f(t) =$ $\boxed{\pi r^6}$.